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# DAMES & MOORE

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July 11, 1978

Environmental Protection Agency  
 Region X  
 1200 Sixth Avenue  
 Seattle, Washington 98101

Attention: Mr. Michael Johnston

Gentlemen:

On behalf of Atlantic Richfield Company (ARCO), Sohio Petroleum Company (SOHIO), and ourselves, we wish to express our appreciation for the opportunity to meet with you Friday, June 30, 1978 and discuss the Prevention of Significant Deterioration (PSD) permit application for modifications to the Prudhoe Bay Field, Alaska.

In accord with our conversations at that meeting, and the information packet you provided, we are proceeding with our analyses. With reference to the agenda for that meeting our analyses are proceeding as follows:

- BACT. For the best available control technology (BACT) analyses our approach is to discuss the arid and cold region operating conditions and the applicability of the proposed new source performance standards (NSPS) to such conditions. Also, we are referencing recent discussions that ARCO and SOHIO has had with the Environmental Protection Agency (EPA) at Triangle Park concerning NSPS for natural gas fire turbines.

- Emission Data. Existing sources at the Prudhoe Bay field are defined as all those sources permitted by the State of Alaska. We are using EPA emission factors in accord with AP-42.

- Meteorological Data. We are using hourly observations from Deadhorse and Prudhoe Bay as input for the short-term model analyses. Deadhorse is the prime station and Prudhoe Bay, four miles to the north-northeast, is the secondary station. For upper air data we are using ten years of radiosonde soundings from Barter Island, approximately 150 kilometers to the east.

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- Dispersion Modeling. For short term modeling we are using CRSTER. The model that we are using has been modified by Dames & Moore in order that the stacks or individual emission sources may be separated. This modification has been approved by EPA Region VI, and we will be including in the application the same information previously submitted to Region VI. For long-term analyses we are using CDM. With respect to the dispersion coefficients for CDM we will discuss the applicability of the urban coefficients that are used in CDM. In accord with the conversations at our June 30th meeting, we will demonstrate that the results obtained from CDM with urban coefficients are more conservative than those that would be obtained from hypothetical rural coefficients.

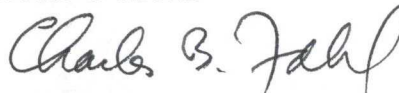
- Flaring. Flaring will be discussed, as it was in our meeting, in terms of short-term temporary sources. We will discuss the historic record of flaring at the Prudhoe Bay field and will describe the State of Alaska's limitations on flaring, including those limitations dictated for conservation reasons by the Alaska Department of Natural Resources.

As we discussed in our June 30 meeting, we intend to submit the application on behalf of ARCO and SOHIO prior to the August 7, 1978 deadline, probably during the week of July 24 - 28. It is our understanding that EPA Region X will review all PSD applications and make a judgement as to whether or not "a good faith" effort was made on the part of the applicant in their submittal. If an application is judged to comprise a "good faith" effort and is submitted prior to August 7, 1978, then it will have been submitted on time. We are confident that the level of effort we have undertaken on behalf of ARCO and SOHIO will be more than adequate to meet these requirements. We intend to communicate frequently with EPA Region X in the next several weeks, as our analyses continue and our report is being prepared, in order to maximize the completeness of the data submittal.

We trust the above meets your approval and is in keeping with our June 30th conversations. If you have any suggestions or questions please call us at your earliest convenience. Also, if further developments occur relative to EPA national guidelines on PSD permit applications, we would appreciate hearing about these as earliest as possible.

Yours very truly,

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Charles B. Fahl, Ph.D  
Senior Meteorologist

CBF:rh

xc: Atlantic Richfield Company  
Attention: W. P. Metz

Sohio Petroleum Company  
Attention: H. A. Schmidt